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Relationship Between Posttraumatic Growth and Demographic and Clinical Factors Among Turkish Cypriot Breast Cancer Survivors

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Abstract

Breast cancer is the most commonly diagnosed cancer type among women which is a life- threatening and traumatic experience for women. Recently, possible positive consequences of breast cancer rather than focusing on negative consequences have begun to be emphasized in the literature. At this point, the concept of posttraumatic growth arises. The aim of the present study was to assess the relationship between demographic and clinical factors and posttraumatic growth among postoperative breast cancer patients. The study was conducted with 31 postoperative breast cancer women (mean age=50.48, SD=11.59). "Posttraumatic Growth Inventory (PTGI) and a demographic information form consisting of questions about demographic characteristics of the patients and questions about the experiences of the patients after the diagnosis and the treatment process of breast cancer. The results revealed that posttraumatic growth is present among Turkish Cypriot breast cancer survivors, with an average mean score of 80.71 (SD=19.86). However, no relationship was found between posttraumatic growth and demographic and clinical factors based on the results of the study. The results were discussed with reference to previous literature. Finally, limitations of the study, clinical implications and recommendations for further research were also provided.

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Keywords: breast cancer, posttraumatic growth, demographic factors, clinical factors.

1. Introduction

Recently, cancer is a fairly common disease which is perceived as an important and current health problem worldwide. It is a life- threatening and traumatic experience for women which has both physical and psychological

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effects on the patients. According to the literature, breast cancer patients are prone to experience psychological problems. It is known that psychiatric disorders are prevalent among cancer patients (Silberfarb, 2006). Furthermore, Burgess, Cornelius, Love, Graham, Richards and Ramirez (2005) showed that depression and anxiety are common psychological problems among women with early breast cancer. Jansen and Muenz (1984) also stated that affective disorders are prevalent among breast cancer patients. They figured out that breast cancer patients reported themselves as more depressive, having low anger levels and difficulty in expressing their emotions when compared to benign patients group and control group. Adjustment disorders and sexual disturbances are other psychological problems which might occur after being diagnosed with breast cancer (Fallowfield & Hall, 1991). Cassem (1991) proposed main problem areas for some cancer types such as prostate, lung, colon and breast. For breast cancer, changes in the body image perception due to mastectomy or breast-conserving surgery, side effects of chemotherapy such as weight gain, fatigue, difficulty in concentration and hair loss, symptoms of menopause such as insomnia and sexual dysfunction, anxiety related with sexuality and fertility and problems related with intimate partners are reported as problems that breast cancer patients might experience. Uncertainty and fear about the future, attempts at giving meaning to disease, loss of control, emotions of inability and failure, fear of stigmatization and attempts to conceal the disease are other psychological problems which breast cancer patients might have to deal with (Ozkan, 2007). Breast cancer might result in impairs in many domains of life such as family relations, sexuality and self-care (Ozkal & Arikan, 2014). When family relations are considered, concept of social support which is the information that leads an individual to perceive that he/she is loved, valued, cared for and belongs to a network of communication (Campbell & Gilmore, 2014) arises. When individuals with chronic diseases such as cancer and asthma (Muhbes & Alyeassery, 2014) experience lack of social support especially family support, they are more likely to experience negative outcomes of breast cancer. Nevertheless, personality characteristics are also important in experience breast cancer more negatively or traumatic such as locus of control which is the basically refers to the extent in which individuals believe that they can control events that affect them and attribute accomplishments and failures to internal or external factors (Chalak, Nasri & HeidariTabrizi, 2014; Dereceli, Dorak & Tekin, 2011). In this case, individuals with higher external control would think that their cancer are caused by fate or luck and this will lead them to think as “why me?” and therefore experience much more trauma.

There are almost over 100 different types of cancer and breast cancer is the most common type of cancer among women which constitutes twenty-three percent of all cancer diagnosis (Tahan, Ziauiddin & Soran, 2009). According to the statistics reported by World Health Organization, 7.6 million people died in the world because of cancer in 2008 and breast cancer was the fifth common cause of cancer deaths, accounted for 458.000 of these deaths (World Health Organization, 2015). In addition to these statistics, Eryilmaz and colleagues (2010) breast cancer is one of the most prevalent and common cause of cancer deaths in Turkey as well. Hadijisavvas and colleagues (2010) stated that data from National Cancer Registry report an average incidence of 400 female breast cancer cases per year in Cyprus. Indeed, according to the statistics provided by Ministry of Health of Turkish Republic of Northern Cyprus (TRNC), the incidence of breast cancer is decreasing. There were 93 female breast cancer cases in 2010, 73 cases in 2011 and 51 cases in 2012 among Turkish Cypriot female population (TRNC Ministry of Health, 2014).

Breast is generally associated with maternity and femininity in most cultures. This might make the treatment process much more traumatic for women. Therefore, it can be inferred that breast cancer is perceived as a threat for women’s feminine and maternal identity, body image, sexuality, self-confidence, self-esteem, psychological status and relationships with the environment (Lantz & Booth, 1998). Due to it’s prevalence and negative outcomes, many research in literature about the psychological consequences of breast cancer among women such as trauma and especially posttraumatic stress disorder, depression or other anxiety disorders. In the literature, it has been documented that women with breast cancer are likely to experience post-traumatic stress disorder (PTSD) or PTSD-like symptoms. Accordingly, Amir and Ramati (2002) stated that cancer is a chronic, life-threatening disease and patients generally react to breast cancer diagnosis with feelings of intense fear, helplessness, and a sense of horror. Nevertheless, Rubin (2001) noted that women with breast cancer face severe traumas and the reality of having cancer in the body may lead to anxiety over the patient’s future and her continuing life. However, in the recent years, there is more attention to possible positive psychological outcomes of breast cancer in the related literature. Posttraumatic growth is one of the most studied concepts among women with breast cancer after the term proposed by Tedeschi and Calhoun in the 1990s (Tedeschi & Calhoun, 1996). In general terms, posttraumatic growth can be defined as positive psychological, cognitive and emotional changes after experiencing a struggle with a highly

challenging life crisis (Tedeschi & Calhoun, 2004). As a concept, posttraumatic growth is related with positive consequences of traumatic life events and individuals' coping processes after facing with traumatic life situations.

It is generally known that people could transform traumatic events and adversities into gaining wisdom, personal growth, positive personality changes or more meaningful and productive lives. This is in line with the aspects of positive psychology which emphasizes the potentials of human beings. Accordingly, Yalom (1999) mentioned that when people face with the anxiety of death, they use denial as a defense mechanism at first. Then they start to accept death and experience personal change. After a traumatic experience, in this case death anxiety because of cancer, some people manage to reconstruct a way of life. Tedeschi and Calhoun (2004) defined this situation as post-traumatic growth (PTG), which refers to the spectrum of positive changes in which an individual may experience after a traumatic event or situation. They also stated that post-traumatic growth is a positive psychological changes emerged as a result of the struggle with a highly challenging life situation. Stanton and colleagues (2006) indicated that posttraumatic growth is appeared in three main domains which are changes in "self-perception", changes in "relationship with others" and changes in "philosophy of life".

Radiotherapy, chemotherapy, surgical and hormonal treatments are the most commonly used treatment methods for breast cancer. In the treatment of breast cancer, many factors such as stage of cancer, type and characteristics of the tumor, age and preferences of the patient, the patient's general physical health and medical conditions which might influence the treatment and the risks and benefits related with each treatment procedure should be taken into account. Severity and prognosis of the disease should also be considered when deciding which treatment method is sutiable for the patient (Izmirli, Yilmaz, Alan, Yalciner, Berberoglu & Unsal, 2006). Survival from breast cancer is improving with early diagnosis and early improvement might be achieved with the optimization of screening and identification of women who are at high risk for developing breast cancer.

Cancer cells are named in which part of the body the tumor originates. In this perspective, breast cancer starts in the breast tissue. Breast cancer is commonly detected by a screening examination in which when the symptoms have not developed yet, or after the symptoms have developed when woman notices a lump. Breast cancer screening tools are basically mammography, magnetic resonance imaging (MRI), clinical breast examination (CBE), breast self-awareness of women, breast ultrasound and surgical biopsy. All these screening tools are used to detect the tumor, decide if the tumor is benign or cancerous, make a definitive diagnosis, determine the extent of spread of the cancer cells throughout the body, and characterize the prognosis of the disease such as staging. With these screening tools, it is expected to achieve an earlier diagnosis and improve the outcomes (American Cancer Society, 2014).

Staging is important in the process of diagnosis and treatment of breast cancer. It is a useful method which has been developed to identify the extent of cancer growth in the body. For breast cancer, staging is based on the information obtained from the screening tools (Manoharan & Pugalendhi, 2010). Pathologists describe four stages in breast cancer. Stage I is the earliest stage of invasive breast cancer. The tumor is not bigger than 2 centimeters and the cancer cells have not spread throughout the body. In stage II, the tumor is between 2 and 5 centimeters and the cancer cells might have spread to the lymph nodes under the arm. In stage I and II the duration of treatment process decrease and the possibility of recovery increases. In stage III, the tumor is more than 5 centimeters. The cancer has spread to the underarm lymph nodes or to other structures behind the breastbone. Stage IV is the latest stage of breast cancer. It is also identified as distant metastatic breast cancer. In other words, the cancer has spread to other parts of the body. Staging is very important because after the diagnosis, the treatment process is shaped based upon the stage of the breast cancer since survival is lower among women with a more advanced stage at diagnosis.

In the light of these information and related literature mentioned above, the relationship between posttraumatic growth and demographic and clinical factors among women with breast cancer were examined in this study.

1.1. Aim of the Study

The aim of this study was to assess the relationship between posttraumatic growth and some demographic and clinical factors among postoperative breast cancer patients. In line with this aim, the relationship between some demographic characteristics of the participants such as education level, marital status, perception of income level, working status, having children and the variables of the study were analyzed. Also, illness related characteristics such as stage of cancer, time since diagnosis, having or not having a posttreatment, if cancer has affected some domains of their lives negatively were also analyzed to detect if there are relationships between them and posttraumatic growth.

2. Method

2.1 Participants

The present study was conducted with 31 postoperative breast cancer patients (mean age=50.48, SD=11.59) who were undergoing postoperative medical or hormonal treatment, chemotherapy and radiotherapy. To be eligible for participation in the current study, the criteria were being older than 18 years old, having a diagnosis of primary breast cancer within the past 5 years and at least three months should have passed after the surgery, but not more than three years should have passed after treatment.

2.2 Instruments

"Posttraumatic Growth Inventory" (PTGI) and a socio-demographic information form were used to collect data from the patients. The PTGI was developed by Tedeschi and Calhoun (1996), translated into Turkish by Kilic (2005) and then revised and adapted by Dirik and Karanci (2008). The PTGI assess positive changes perceived as a result of coping with trauma or illness and consisted of 21 items and has 5 subscales that are new possibilities, relating to others, personal strength, spiritual change, and appreciation of life. Each item was rated on a 6-point scale ranging from 0 (I did not experience this change as a result of my crisis) to 5 (I experienced this change to a very great degree). According to Dirik and Karanci (2008), factor analysis of PTGI demonstrated 3 factors which were labeled as changes in 'relationship with others' (Cronbach's Alpha = .86), 'philosophy of life' (Cronbach's Alpha = .87) and 'self-perception' (Cronbach's Alpha = .88) in Turkish sample. Tedeschi and Calhoun (1996) stated that the internal consistency coefficient of the scale was .90 and the test-retest reliability with 2-month interval was .71.

Socio-demographic information form consisted of questions about socio-demographic characteristics of the participants and their illnesses. Questions are on the age, education level, marital status, income level, hometown, work status, number of children. The questions regarding the illness are about the time of diagnosis, the stage of breast cancer at the time of diagnosis, type of the posttreatment (chemotherapy, radiotherapy and hormonal therapy), if they have informed about the illness by their doctors or not, if breast cancer affected their sexual lives, family relationships and occupational lives negatively or not.

2.3 Data Analysis

All collected data for this current research were analyzed by using 20th version of the Statistical Package for the Social Sciences (SPSS). In order to test the hypothesis of the current study data were analyzed by using, t-test analysis, One-way ANOVA and Pearson correlation. Findings were interpreted as statistically significant at $p \leqslant 0.05$ level.

3. Results

According to the results of this study, no demographic characteristics and no illness related characteristics have been found to be related with posttraumatic growth. In this section, results are provided in line with the literature and discussed in the next section. Results related with perception of income, stage of breast cancer at the time of the diagnosis which is cited in the literature as important predictors of posttraumatic growth are provided with tables revealing no statistical significance.

Table 1. Descriptive statistics of the total scores from the PTGI

	n	Mean	*SD*	Min.	Max.
PTGI	31	80.71	19.86	29	105

As it can be seen in table 1, posttraumatic growth is present among Turkish Cypriot breast cancer survivors, with an average mean score of 80.71 (SD=19.86).

Table 2. One-way ANOVA results of PTGI mean scores and perception of economic situation

Perception of economic situation	m ± sd	f(p)
Low	69.80 ± 27.54	2.232 (0.146)
Middle	83.00 ± 17.83	
High	80.71 ± 19.86	

Table 2 showed that no statistically significant difference was found between participants' scores on PTGI and perception of economic situation.

Table 3. One-way ANOVA results of PTGI mean scores and stage of breast cancer at the time of diagnosis

Stage of cancer	m ± sd	f(p)
First Stage	77.14 ± 22.94	0.957 (0.427)
Second Stage	76.84 ± 9.85	
Third Stage	90.11 ± 18.84	
Fourth Stage	73.00 ± 00.00	

It can be seen from the Table 3 that no statistically significant difference was found between participants' scores on PTGI and the stage of cancer at the time of diagnosis.

4. Discussion

In this study, the relationship between some demographic characteristics of the participants such as education level, marital status, perception of income level, working status, having children and the variables of the study were analyzed. Also illness related characteristics such as stage of cancer, time since diagnosis, having or not having a posttreatment, if cancer has affected some domains of their lives negatively were also analyzed to detect if there are relationships between them and posttraumatic growth. However, no demographic characteristics and no illness related characteristics have been found to be related with posttraumatic growth. In other words, the results did not reveal any statistically significant differences in terms of suggesting a relationship between posttraumatic growth and any demographic or illness related characteristics. This finding is inconsistent with the literature suggesting that there are some demographic and illness related characteristics which have been found to be associated with posttraumatic growth among breast cancer survivors. For instance, according to Cordova and colleagues (2001), higher income is positively associated with posttraumatic growth among breast cancer patients. Nevertheless, Tomich and Helgeson (2004) indicated that women diagnosed with more severe breast cancer perceived more benefits from cancer experience following diagnosis than women diagnosed with less severe breast cancer. In other words, stage of breast cancer is an important factor in the development of posttraumatic growth among breast cancer patients. However, in the current study, no relationship has been found between the stage of breast cancer and posttraumatic growth.

As it can be seen from the results, participants reported high posttraumatic growth regardless of some their demographic and illness related variables. This can be interpreted as a situation in which although breast cancer is a really challenging and traumatic life event, people have the ability to develop posttraumatic growth regardless of their demographic and illness related characteristics. Based on the definition of posttraumatic growth, it is assumed that after experiencing a traumatic or highly challenging life event, people can show positive symptoms such as adaptation to life, changing their philosophy of life and have more quality of life. Morrill and colleagues (2007) indicated that posttraumatic growth had a positive relationship with posttraumatic stress symptoms among breast cancer patients. Moreover, Cordova and colleagues (2007) revealed that breast cancer patients who perceived cancer as a traumatic stressor experienced both stress response symptoms and perception of positive changes. There is a possible explanation for these findings. Since breast cancer is a trauma, it involves actual or threatened death and had a threat to physical integrity. Accordingly, breast cancer patients feel fear, helplessness and horror due to cancer. In addition, all types of traumas and therefore in this case breast cancer appear suddenly and disrupt individual's prior beliefs, thoughts, evaluations about life and others. Therefore, while breast cancer patients experiences these negative consequences of breast cancer, they might also try to find benefit from this highly challenging experience, restructure their beliefs, thoughts, and appraisals about life and change their life priorities. As a result, participants show higher posttraumatic growth regardless of their some demographic and illness related characteristics.

Since there is not any previous study examining the relationship between posttraumatic growth and some variables among the Turkish Cypriot postoperative breast cancer patients, the present study could be considered as a pilot study for other research in this area. Focusing on the possible positive consequences of trauma could provide many benefits to professionals who work with cancer patients in clinical settings in terms of contributing to the adaptation process after diagnosis and posttreatment. In this sense, the results of the present study might contribute to the discipline which handles health and diseases from a biopsychological perspective which is called consultation-liasion psychiatry. Consultation-liasion psychiatry tries to integrate medicine and psychiatry and claims that psychological interventions are really important in the treatment of the chronic diseases (Ozkan, 2007). The present study showed that breast cancer patients develop posttraumatic growth and therefore, this study should be considered as a contribution to the area of consultation-liasion psychiatry.

5. Conclusion and Recommendations for Future Studies

In this study, the results showed that women with breast cancer experience posttraumatic growth after having operation. According to the results, no demographic or illness-related characteristic was found to be related with experiencing posttraumatic growth after operation. Due to several reasons, the sample size of the study was small and this might lead to problems about the generalizability of the results. 31 women who had diagnosed with breast cancer and had an operation participated to the study. This study was conducted in the oncology departments of two hospitals and only 31 participants could be included to the study. North Cyprus is a country with a small population and this can be an important factor for the small sample size of the study. Future studies should include larger sample sizes in order to improve the statistical power and generalizability of the results. Including participants with other cancer types might have yielded different results and there would be the opportunity to make comparisons among groups with different cancer types.

In conclusion, the study tried to show that although breast cancer is a traumatic and highly challenging situation, women have the tendency to experience posttraumatic growth after diagnosed and with breast cancer and had surgery. At this point, it is important to understand and reveal the factors contributing to the development of posttraumatic growth to contribute to the posttreatment process by facilitating the possible positive outcomes of breast cancer. Therefore, it can be said that this study might lead to future studies which will be conducted among postoperative breast cancer patients in the North Cyprus community.

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